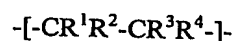


## CLAIMS:

1. A luminaire comprising a housing suitable for accommodating at least one light source for emitting a light beam through a light-transmitting plate of the housing, characterized in that a diffuse reflective coating is provided on an inner side of said housing, the diffuse reflective coating having a water-based solvent and a binder based on a polymer  
5 having the following structural formula:



- wherein  $R^1$  comprises an element chosen from the group Br, Cl, I, F, H, wherein  $R^2$   
10 comprises an element chosen from the group Br, Cl, I, F, H, or an alkyl group, wherein  $R^3$  comprises an element chosen from the group Br, Cl, I, F, H, or  $COOCH_3$ , and wherein  $R^4$  comprises an element chosen from the group Br, Cl, I, F, H, OH, or vinyl ether.
2. A luminaire according to claim 1, wherein said structural formula contains at  
15 least 30% by weight of the group Br, Cl, I, F, or  $COOCH_3$ .
3. A luminaire according to claim 1 or 2, wherein the solvent comprises at least 80 % by weight of water.
- 20 4. A luminaire according to claim 1, 2 or 3, wherein the diffuse reflective coating is applied as a back reflector on the inner back surface of the housing.
5. A luminaire according to claim 4, wherein the diffuse reflective coating reflects more than 90%, particularly more than 95% of normally incident light thereon.  
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6. A luminaire according to any of the preceding claims 1 through 5, wherein the diffuse reflective coating is cross-linked with a polyisocyanate compound.

7. A luminaire comprising a housing suitable for accomodating at least one light source for emitting a light beam through a light-transmitting plate of the housing, characterized in that said housing is provided with a diffuse reflective coating having a binder on the basis of organically modified silane of the sol-gel type, wherein said diffuse reflective coating is applied as a diffuser on the light-transmitting plate.

8. A luminaire according to claim 7, wherein said organically modified silane has the following structural formula:



wherein  $R^I$  comprises an alkyl group or an aryl group and wherein  $R^{II}$  comprises an alkyl group.

15 9. A luminaire according to any of the preceding claims 1 through 6, wherein the diffuse reflective coating is applied as a diffuser on the light-transmitting plate.

10. A luminaire according to claim 9, wherein the diffuse reflective coating transmits more than 60 %, particularly more than 70 % of normally incident back light thereon.

11. A luminaire according to claim 9 or 10, wherein the diffuse reflective coating is provided with a layer that blocks ultraviolet light.

25 12. A luminaire according to claim 11, wherein said layer is applied on one side and/or both sides of the diffuse reflective coating and/or within the diffuse reflective coating.

13. A luminaire according to claim 11 or 12, wherein said layer comprises a metal oxide chosen from the group of  $ZnO$ ,  $M_2O_3$  (M being B, Al, Sc, La or Y) and  $MO^2$  (M being Ce, Ge, Sn, Ti, Zr, or Hf) or a metal phosphate chosen from the group of  $M_x(PO_4)_n$  and  $M_x(PO_3)_n$  (M being an alkali metal, an earth alkali metal, Al, Sc, Y, La, Ti, Zr. or Hf).

14. A luminaire according to any of the preceding claims 1 through 13, wherein the diffuse reflective coating comprises calcium halophosphate, calcium pyrophosphate,  $\text{BaSO}_4$ ,  $\text{MgO}$ ,  $\text{YBO}_3$ ,  $\text{TiO}_2$ , or  $\text{Al}_2\text{O}_3$  particles.

5 15. Device with an LCD screen having a luminaire according to any of the preceding claims 1 through 14.

16. Ceiling element or wall element having a luminaire according to any of the preceding claims 1 through 14.